

SR870BN4 Configuration Guide

**A quick reference guide to assist customers in ordering the components
necessary to configure the SR870BN4 platform**



Revision 1.6

October 18, 2004

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. Intel products are not intended for use in medical, life saving, life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

The SR870BN4 may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

SR870BN4 Configuration Guide

Table of Contents

SR870BN4 Feature Dependencies	3
SR870BN4 Power Subsystem Supported Features	3
Base System Configuration Guide	4
Integrated System Configuration Guide	6
Reference Documentation Information	8
SR870BN4 SKU List	9
Small Parts Kit Contents	10

SR870BN4 Feature Dependencies

Feature	Required Hardware for Model 0 (SBNMB000)	Required Hardware for Model 1 (SBNMB00X)
1 to 4 Processors	One processor heat sink and one power pod for each processor, plus 1 Y-cable for each pair of power pods.	One processor heat sink and one power pod for each processor, plus 1 Y-cable for each pair of power pods.
	Thermal Blanks needed in empty CPU slots (included in Model 0).	Thermal Blanks needed in empty CPU slots (included in Model 1).
16 DDR DIMM slots	Two memory boards (included in Model 0). Memory must be installed in groups of 4 DIMMs (details on DIMM order are provided in the product guide ¹).	Two memory boards (included in Model 1). Memory must be installed in groups of 4 DIMMs (details on DIMM order are provided in the product guide ¹).
Redundant Power Supplies	Model 0 has 1 power supply. A 2nd power supply must be added if redundancy is needed (only redundant at 200V – 240V).	Model 1 has 2 power supplies for redundancy at 200V – 240V.
3 Hot Plug SCSI disk drives	Three SCSI drive carriers are included in Model 0. Requires ½ inch height (slim line), 3.5 inch SCSI drives. See Intel's list of supported drives ¹ .	Three SCSI drive carriers are included in Model 1. Requires ½ inch height (slim line), 3.5 inch SCSI drives. See Intel's list of supported drives ¹ .
Embedded Network Controller (NIC)	Model 0 contains onboard controller with 1 Ethernet port.	Model 1 contains onboard controller with 1 Ethernet port.
IDE Devices	See Intel's list of supported drives ¹ .	Model 1 includes (1) DVD ROM device. See Intel's list of supported drives ¹ .

SR870BN4 - Power Subsystem Supported Features

The SR870BN4 Model 0 comes with 1 power supply, which is sufficient for any configuration of processors, memory and I/O devices possible at 200V – 240V, but does not provide redundancy. A filler panel must be installed in systems using only 1 power supply

The SR870BN4 Model 1 comes with 2 power supplies, which is sufficient for any configuration of processors, memory and I/O devices possible at 200V – 240V and provides redundancy.

The DC to DC (D2D) converters needed for the maximum system configuration are as follows:

- Two 5V DC to DC converters (standard on Model 0 and Model 1)
- Five 2.5/3.3V DC to DC converter (standard on Model 0 and Model 1)

¹ See “Reference Information” section on page 8 for details on available documents

¹ See “Reference Information” section on page 8 for details on available documents

Base System Configuration Guide

SBNMB000

MM# 860136

1. "Model 0" Base Systems are configured with the following:

- 1 Chassis (4U, Rack Mount)
- 1 Processor Baseboard (includes: 1 Y Cable and 4 sockets for Itanium® 2 processor, Madison and Montecito processors)
- 2 Memory Boards (2 x 8 DRR RAM DIMM sockets, 32GB total memory capacity)
- 1 I/O Baseboard with 8 PCI slots, on-board Ultra 320 SCSI controller
- 1 I/O Riser board with 4M of FLASH ROM, Baseboard Management Controller (BMC), Ports (4 USB, 1 Serial, 1 Video), and 10/100/1000 Intel 82540EM Ethernet Embedded Network Controller
- 1 Power Distribution Board
- 1 SCSI Hot Swap Backplane
- 1 Midplane Board
- 1 Front Panel Board
- 1 1200 W Power Supply
- 5 2.5 / 3.3V DC to DC Converters
- 2 5V DC to DC Converters
- 2 1" Fans
- 2 1.5" Fans
- 3 SCSI Disk Drive Carriers
- 1 Front Bezel, 1 P-Bay Bezel (color: Raven Black)

1 Resource Kit containing the following on CDROM: Documents: Product Guide and Product Quick Start Guide; Utilities: SDR Viewer, SEL Viewer, FRU/SDR Loader, System Maintenance Utility (SMU), EFI Platform Diagnostics, EFI Configuration Tool, and LSI Logic SCSI Driver for Linux† (64-bit) and Windows† .NET

2. They do NOT contain the following *necessary* items:

- Processors
- Processor heat sinks
- Processor Power Pods
- External Power Cords
- Rack Mount Slide Rail Kit
- Hard Disk Drives
- Memory

3. To order your necessary items use the following table:

Product Codes	MM#	Min Order Qty	Description
ATG13G3MCPUHS	855100	1	Processor / Heat Sink Kit (includes: 1.3GHz / 3MB cache Itanium® 2 processor with heat sink attached)
ATG14G4MCPUHS	855101	1	Processor / Heat Sink Kit (includes: 1.4GHz / 4MB cache Itanium® 2 processor with heat sink attached)
ATG15G6MCPUHS	855102	1	Processor / Heat Sink Kit (includes: 1.5GHz / 6MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1500H	864776	1	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1600J	864770	1	Processor / Heat Sink Kit (includes: 1.6GHz / 6MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1600K	867433	1	Processor / Heat Sink Kit (includes: 1.6GHz / 9MB cache Itanium® 2 processor with heat sink attached)
ATGPPOD	848769	1	Power Pod with Y cable
ATGRAILKIT	848491	1	Rackmount Slide Rail Kit for standard EIA compliant 19" inch rack
Hard Disk Drives	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of

			supported drives ¹
Memory	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of qualified memory DIMMs ¹ .

4. Additional accessories that may be desirable for your configuration are:

Product Codes	MM#	Min Order Qty	Description
ATG1200PS	848745	1	Power Supply, 1200W, PFC, 48V and 12V outputs, hot swap
ATGDVDROMKIT	852744	1	Panasonic * DVDROM drive, Adapter Board & Carrier
ATGCDDVDCAR	848497	1	Slim Line CDROM/DVD Adaptor Board & Carrier, no drive ¹
ATGSCSICC	848590	1	External SCSI Cable & Connector
ATGRAIDCBL	848874	1	RAID Cable for External Drives
ATGSMLPRTSKIT	848629	1	Small Parts Kit (includes: spare CPU thermal blank, insertion extraction mechanisms, PCI slot dividers, PCIX IO baseboard protective cover, Hot Plug manually operated retention latches, power supply filler panel, and screws)

¹ See "Reference Information" section on page 8 for details on available documents

¹ See "Reference Information" section on page 8 for details on available documents

Integrated System Configuration Guide

SBNMB000X

MM# 860137

1. Integrated Systems are configured with the following:

- 1 Chassis (4U, Rack Mount)
- 1 Processor Baseboard (includes: 1 Y Cable and 4 sockets for Itanium® 2 processor, Madison and Montecito processors)
- 2 Memory Boards (2 x 8 DRR RAM DIMM sockets, 32GB total memory capacity)
- 1 I/O Baseboard with 8 PCI slots, on-board Ultra 320 SCSI controller
- 1 I/O Riser board with 4M of FLASH ROM, Baseboard Management Controller (BMC), Ports (4 USB, 1 Serial, 1 Video), and 10/100/1000 Intel 82540EM Ethernet Embedded Network Controller
- 1 Power Distribution Board
- 1 SCSI Hot Swap Backplane
- 1 Midplane Board
- 1 Front Panel Board

2 1200 W Power Supply

- 5 2.5 / 3.3V DC to DC Converters
- 2 5V DC to DC Converters
- 2 1" Fans
- 2 1.5" Fans
- 3 SCSI Disk Drive Carriers
- 1 Front Bezel, 1 P-Bay Bezel (color: Raven Black)

1 Rack Mount Slide Rail Kit

- 1 Slim Line DVD IDE Device

1 External SCSI Cable & Connector

1 RAID Cable for External Drives

1 Resource Kit containing the following on CDROM: Documents: Product Guide and Product Quick Start Guide; Utilities: SDR Viewer, SEL Viewer, FRU/SDR Loader, System Maintenance Utility (SMU), EFI Platform Diagnostics, EFI Configuration Tool, and LSI Logic SCSI Driver for Linux† (64-bit) and Windows† .NET

2. They do NOT contain the following *necessary* items:

- Processors
- Processor heat sinks
- Processor Power Pods
- External Power Cords
- Hard Disk Drives
- Memory

3. To order your necessary items use the following table:

Product Codes	MM#	Min Order Qty	Description
ATG13G3MCPUHS	855100	1	Processor / Heat Sink Kit (includes: 1.3GHz / 3MB cache Itanium® 2 processor with heat sink attached)
ATG14G4MCPUHS	855101	1	Processor / Heat Sink Kit (includes: 1.4GHz / 4MB cache Itanium® 2 processor with heat sink attached)
ATG15G6MCPUHS	855102	1	Processor / Heat Sink Kit (includes: 1.5GHz / 6MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1500H	864776	1	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium®

Note - differences from the Base System Configuration Guide (SBNMB000 Model 0) are bold and underlined

			2 processor with heat sink attached)
BX80543KC1600J	864770	1	Processor / Heat Sink Kit (includes: 1.6GHz / 6MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1600K	867433	1	Processor / Heat Sink Kit (includes: 1.6GHz / 9MB cache Itanium® 2 processor with heat sink attached)
ATGPPOD	848769	1	Power Pod with Y cable
Hard Disk Drives	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of supported drives ¹
Memory	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of qualified memory DIMMs ¹ .

4. Additional accessories that may be desirable for your configuration are:

Product Codes	MM#	Min Order Qty	Description
ATGSMLPRTSKIT	848629	1	Small Parts Kit (includes: spare CPU thermal blank, insertion extraction mechanisms, PCI slot dividers, PCIX IO baseboard protective cover, Hot Plug manually operated retention latches, power supply filler panel, and screws)

¹ See "Reference Information" section on page 8 for details on available documents

Reference Documentation Information

1. **SR870BN4 Hardware and Operating System Validation Test List Plan** – contains a prioritized list of operating systems and adapter cards Intel plans to validate. Available on IBL.

2. **SR870BN4 System Enabling Components Document** – includes component descriptions, functions, part numbers, and vendor contacts for heat sinks, power supplies, power pods, Y cable, power cables, DC to DC converters, and bezels. Available on IBL.

3. **SR870BN4 Product Guide** – provides detailed information on board and system component descriptions and features, SW and utility configurations, hot swappable system components, servicing, and technical reference guide. Provided with Model 0 and Model 1 systems, and also available on IBL.

SR870BN4 SKU List

	Product Code	MM#	Description	Minimum Order Qty
Systems	SBNMB000	860136	Model 0 System (see page 4 for details)	1
	SBNMB000X	860137	Integrated System (see page 6 for details)	1
Boards	BBACPUBOARD	865351	CPU Board	1
	BBADDRMEM1GB	857680	Memory Board	1
	BBAIOBOARD	857654	I/O Board	1
	BBARFRECH4	865257	I/O Riser Board	1
	BBASCSIHSP	865145	Hot Swap SCSI Backplane Board	1
	BBAMIDPLANE	848668	Passive Midplane Board	1
	BBAHPIBBOARD	848666	Hot Plug Indicator Board (w/ chassis ID LED & insulation for PCI slots), does not include cable	1
	BBAFPNL	848802	Front Panel Board (w/chassis ID LED & illuminated On/Off switch)	1
	BBAPDB	848663	Power Distribution Board	1
Accessories	ATG1200PS	848745	Power Supply, 1200W, PFC, 48V and 12V outputs, hot swap	1
	ATG13G3MCPUHS	855100	Processor / Heat Sink Kit (includes: 1.3GHz / 3MB cache Itanium® 2 processor with heat sink attached)	1
	ATG14G4MCPUHS	855101	Processor / Heat Sink Kit (includes: 1.4GHz / 4MB cache Itanium® 2 processor with heat sink attached)	1
	ATG15G6MCPUHS	855102	Processor / Heat Sink Kit (includes: 1.5GHz / 6MB cache Itanium® 2 processor with heat sink attached)	1
	BX80543KC1500H	864776	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium® 2 processor with heat sink attached)1	1
	BX80543KC1600J	864770	Processor / Heat Sink Kit (includes: 1.6GHz / 6MB cache Itanium® 2 processor with heat sink attached)	1
	BX80543KC1600K	867433	Processor / Heat Sink Kit (includes: 1.6GHz / 9MB cache Itanium® 2 processor with heat sink attached)	1
	ATGPPOD	848769	Power Pod with Y Cable	1
	ATGD2D3VS3	848486	DC to DC Converter, 2.5 / 3V (VID, 3 Per CPU Bd, 2 Per I/O Bd), Rev. S3	1
	ATGD2D5VS3	848488	DC to DC Converter, 5V (2 per I/O Bd), Rev. S3	1
	ATGCDDVDCAR	848497	Slim Line CDROM/DVD Adaptor Board & Carrier, no drive	1
	ATGHDCARTORX	848499	Slim Line HDD carrier, no drive	1
	ATGSCSICC	848590	External SCSI Cable and Connector	1
	ATGRAILKIT	848491	Rackmount Slide Rail Kit	1
	ATGCOUNTKIT	848726	Resource Kit (see page 4 for details)	1
	ATGSMLPRTSKIT	848629	Small Parts Kit (see page 7 for details)	1
	Spares	ATGSHEETMTL	848905	Chassis (sheet metal kit, no boards)
ATG10FAN		848847	1" Fan	1
ATG15FAN		848724	1.5" Fan	1
ATGCPUMOD		848723	CPU / Memory Module Carrier, no boards	1
ATGFBZL		848493	Front Bezel (color: Raven Black)	1
ATGPBAYBZL		848593	P-Bay Bezel (color: Raven Black)	1
ATGRAIDCBL		848874	RAID Cable for External Drives	1
ATGACCBL		848600	Internal AC cable	1
ATGCBLKIT		848805	Cable kit (internal Hot Plug Indicator Board, Power POD, Y Cables), does not include AC Cable	1

Small Parts Kit Content

ATGSMLPRTSKIT MM# 848629

Quantity	Item
2	Shoulder Screw, Insert/Extract Mechanism
2	Insertion / Extraction Mechanism, Left
2	Insertion / Extraction Mechanism, Right
1	Insertion / Extraction P-Bay Mechanism, Left
1	Insertion / Extraction P-Bay Mechanism, Right
2	PCI Divider – Short
2	PCI Divider – Long
3	Hot Plug Manually Operated Retention Latches
2	Locking Card Guide
2	PCI Filler Panel
2	PCI EMI Shield
2	EMI Clip – Small
2	EMI Clip – Large
1	Insertion / Extraction Collar
1	SCSI Backplane Captive Fastener
1	PDB / CPU Board Captive Fastener
1	AC Power Cord Strain Relief
1	Processor / Power Pod Thermal Blank
1	Power Supply Filler Panel